



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,529	04/26/2000	Michael D. Stokes	203298	9677

23460 7590 05/05/2003

LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6780

EXAMINER

BHAT, ADITYA S

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	09/558,529	Applicant(s)	STOKES, MICHAEL D.
Examiner	Aditya S Bhat	Art Unit	2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 26 April 2000.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-3,5,6,8,14-21 and 23-25 is/are rejected.

7) Claim(s) 4,7,9-13 and 22 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 26 April 2000 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

4) Interview Summary (PTO-413) Paper No(s) _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-6, 8, 14-21, and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Lippincott (USPN 6,459,825).

With regards to claim 1, Lippincott (USPN 6,459,825) teaches a method of calibrating a digital image capture device, comprising the steps of acquiring a test target (Col. 7, Lines 20-21), determining measurement values from the test target (Col. 7, Lines 20-35), normalizing the measurement values to a range of 0 to 1 (Col. 7, Lines 29 & 42-45), determining white point chromaticity for the digital image capture device (Col. 7, Lines 28-35), converting the normalized measurement values to the digital image capture device white point chromaticity (Col. 4, Lines 56-60), capturing raw color values of the test target with the digital image capture device (Col. 6, Lines 1-5), normalizing the captured raw color values to a range of 0 to 1 (Col. 9, Lines 16-23), regressing the normalized measurement values with the normalized raw color values to determine a first compensation matrix (Col. 9, Lines 23-33), and verifying a level of color fidelity of the digital image capture device (Col. 2 Lines 31-35).

With regards to claim 19, Lippincott (USPN 6,459,825).teaches a method of achieving high color fidelity in a digital image capture device, comprising the steps of capturing color data from an image (Col. 9 Lines 35-40), normalizing the color data to both black and white (Col.7, Lines 28-32), and compensating the normalized color data with a compensation matrix (Col. 9, Lines 23-33).

With regards to claim 23, Lippincott (USPN 6,459,825).teaches a digital image capture device, comprising a memory storage element (Col.9, Lines 63-65) having stored therein a compensation matrix calculated as a regression of normalized raw color data from a test target and normalized measurement data from the test target converted to the color space of the capture device (Col. 9, Lines 23-33).

With regards to claim 2, Lippincott (USPN 6,459,825).teaches the step of determining measurement values from the test target comprises the step of accepting published measurement values for the test target in a physical color space (Col. 9, lines 23-26).

With regards to claim 3, Lippincott (USPN 6,459,825).teaches the step of determining measurement values from the test target comprises the step of measuring the test target with calibrated test equipment in a physical color space.(Col. 7, lines 18-40).

With regards to claim 5, Lippincott (USPN 6,459,825) teaches the step of capturing raw color values of the test target with the digital image capture device comprises the step of disabling any gamma correction function of the capture device prior to capturing raw color values of the test target (Col. 5, lines 64-66).

With regards to claim 6, Lippincott (USPN 6,459,825) teaches the step of regressing the normalized measurement values with the normalized raw color values to determine a first compensation matrix comprises the steps of assigning the normalized measurement values from the test target converted to the capture device white point as the dependent data, and assigning the normalized raw color data as the independent data (Col. 9, lines 20-26).

With regards to claim 8, Lippincott (USPN 6,459,825) teaches the step of regressing is performed on an electronic spreadsheet (Col. 9, lines 24-26).

With regards to claim 14, Lippincott (USPN 6,459,825) teaches the step of acquiring a test target comprises the step of developing a customized test target for a particular application. (Col. 9 lines 17-20)

With regards to claim 15, Lippincott (USPN 6,459,825) teaches the step of acquiring a test target comprises the step of acquiring a test target with at least six color patches thereon. (Col. 9 lines 5-11)

With regards to claim 16, Lippincott (USPN 6,459,825) teaches at least six color patches include a white patch, a black patch, a gray patch, and three orthogonal colors. (Col. 9 lines 5-11)

With regards to claim 17, Lippincott (USPN 6,459,825) teaches the gray patch is in the range of 25% to 75% gray. (Col. 9 lines 2-5)

With regards to claim 18, Lippincott (USPN 6,459,825) teaches the step of acquiring a test target comprises the step of acquiring a test target whose spectral

makeup is representative of the type of material of the objects whose digital images will be captured. (Col. 9 lines 40-44)

With regards to claim 20, Lippincott (USPN 6,459,825) teaches the step of converting the compensated normalized color data from a color space of the capture device to a device independent color space. (Col. 9 lines 1-16)

With regards to claim 21, Lippincott (USPN 6,459,825) teaches the step of compensating the normalized color data with a compensation matrix comprises the step of calibrating the capture device through the following steps: acquiring a test target; (Col. 7 lines 20-21) determining measurement values from the test target (Col. 7 lines 20-35); normalizing the measurement values to both black and white (Col. 7, lines 29 &42-45); determining white point chromaticity for the digital image capture device (Col. 7 lines 28-35); converting the normalized measurement values to the digital image capture device color space (Col. 7 lines 28-35); capturing raw color values of the test target with the capture device (Col. 7 lines 28-35); normalizing the captured raw color values to both black and white (Col. 9 lines 1-16); and regressing the normalized measurement values with the normalized raw color values to determine the compensation matrix in the color space of the capture device (Col. 9 lines 22-33).

With regards to claim 24, Lippincott (USPN 6,459,825) teaches further comprising processing means(16;See figure 1) for normalizing captured color data of an image to black and white said processing means further compensating the normalized captured color data with the compensation matrix to achieve high color fidelity.(Col. 2 lines 30-39)

With regards to claim 25, Lippincott (USPN 6,459,825) teaches processing means further converts the compensated normalized color data from a color space of the capture device to a device independent color space .(Col. 2 lines 40-49)

Claim Objections

Claims 4, 7, 9-13, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 703-308-0332. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Aditya Bhat
April 29, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800